Invitation to Participate Displays

2013 Appliance Efficiency Rulemaking
California Energy Commission

April 8, 2013

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The California Energy Commission

- The state's primary energy policy and planning agency, created by the Legislature in 1974
- Responsibilities include promoting energy efficiency and conservation by setting minimum appliance and building efficiency standards, and other cost-effective measures
- The Commission's appliance and building energy efficiency standards have saved Californians more than $74 billion in reduced electricity bills since 1975

Appliance Efficiency – A Statutory Mandate

Warren-Alquist State Energy Resources Conservation and Development Act

Public Resources Code Section 25402(c)

Requires the Commission to adopt minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy and water efficient appliances whose use requires a significant amount of energy or water on a statewide basis.

Scoping Workshop

August 31, 2011

- The Commission held a Public Workshop to seek comments about the proposed scope of potential new appliance efficiency measures.
- Interested parties
  - gave technical presentations
  - provided comments
  - submitted proposals for various appliances

Order Instituting Rulemaking

March 14, 2012

- The Commission issued an Order Instituting Rulemaking (OIR) to begin the process of considering standards, test procedures, labeling requirements, and other efficiency measures for a number of appliances.
- The rulemaking was divided into three phases based on the information provided by the stakeholders and staff analysis.
- More information related to this proceeding is available online.
  http://www.energy.ca.gov/appliances/2012rulemaking/

Purpose of Invitation to Participate

- The Commission is gathering information to determine how to proceed with products listed in Phase 1 of the OIR.
- The ITP is an opportunity for stakeholders to inform the Commission's policy, direction, and process.
- ITP requests product, market, and other relevant information.
- All interested parties are encouraged to take advantage of this important opportunity to shape the development of draft efficiency standards and measures.

Phase 1 Products

- **Consumer Electronics**
  (computers, displays, game consoles and set-top boxes)
- **Lighting**
  (fluorescent dimming ballasts, light-emitting diodes and multifaceted reflector lamps)
- **Water Appliances** (faucets, toilets, urinals, and water meters)
- **Other Appliances** (commercial clothes dryers, air filter labeling, residential pool pumps & motors and portable electric spa labeling)

Display Categories

Display categories under initial consideration:

- Computer Monitors
- Digital Picture Frames
- Professional Signage (e.g. airport signage)
- Electronic Billboards

Basic Information

Basic Information Requested:

- Product Definition and Scope
- Existing Test Procedures
- Sources of Test Data
- Existing Standards and Standards under Development
- Product Lifetime
- Product Development Trends

Operations

How should the energy efficiency of standalone display devices be measured or bench marked (e.g., energy/area, energy/pixel, etc.)? Why?

- How does display resolution impact power draw?
- How does display brightness impact power draw?

Operations

(Continued)

For each display category:

- What are the modes of operation?
- What is the typical usage profile (duty cycle)?
- What are the typical factory default settings (e.g. power management, brightness, refresh rate, etc.)?

Operations

(Continued)

For each display category:

- What is the maximum and minimum power draw during active mode across various display sizes?
- What is the maximum and minimum sleep/standby mode power draw?
- What is the maximum and minimum power draw with no input data signal (i.e., when the computer is off but the monitor is on)?
- Do power management (e.g. auto power down) operations change depending on connection type (e.g. DVI, HDMI, etc.)? If so, how?

Energy Consuming Features

What built-in energy consuming features are typically included in displays (e.g. cameras, USB charging ports, speakers, etc.)?

- How much energy does each feature use?
- How much does each cost the manufacturer to include on a per-unit basis?
- How common are they?

Energy Saving Features & Technologies

- What energy saving technologies or features are currently included in displays?
  - How much energy does each save?
  - How much does each cost the manufacturer to implement on a per-product basis?
  - How common are they?

- Which energy saving technologies or features could potentially be incorporated in displays?
  - How much energy does each save?
  - How much does each cost the manufacturer to implement on a per-product basis?

Control Features

What features can improve overall display efficiency by changing the duty cycle or lowering the power draw of the equipment (e.g., activity sensor, power management, automatic brightness control)?

- Please explain how these features save energy.
- How much do they cost to implement into a display on a per-product basis?
- What impact would proper implementation of these efficiency features have on the energy consumption of displays?
- Are consumers receptive to these control features?

Market Characteristics

What are the annual California shipments for 2009 to 2012 as well as projected for 2013 to 2015 by display category?

- What are the typical sizes in the market for each display category?
- What is the percent of shipments in the market across the typical sizes and resolutions for each display category?
- What is the percent of shipments by backlight technology (e.g. CCFL, LED [edge & array], OLED or other)?
- What percent of shipments in each display category has automatic brightness adjustment controls?
- What percent of shipments in each category has an easily accessible off switch that reduces power draw to zero?
- How many small businesses are involved in the manufacture, sale, or installation of these products?

Installed Base Characteristics

What is the current California installed base for displays by category?

- What are the typical sizes in the installed base for each display category?
- What percentage of the installed base do these typical sizes account for by display category?
- What are the prevalent display technologies in the installed base? How much energy does each typically consume?

Market Competition for Efficient Products

- What are the current market drivers initiating the improvement of display efficiency?
- How are consumers identifying the most efficient products on the market?
- What is the market share of displays that meet ENERGY STAR 5.1 and 6.0 criteria?

How to Submit Data & Information

- Responses to the Invitation should be submitted in writing to the Dockets Unit by 4:00 p.m. (Pacific Daylight Savings Time) on May 9, 2013.
- The Commission encourages interested parties to send information **up to 5 MB** by e-mail at docket@energy.ca.gov
- To comment on displays, please include docket number 12-AAER-2A in the subject line.

How to Submit Data & Information

(Continued)

If the file size is more than 5 MB, if the information includes an application for confidential designation, or if you prefer, paper copies of responses with electronic information provided on a CD or DVD may be sent to:

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 12-AAER-2A
1516 Ninth Street
Sacramento, CA 95814-5512

Confidentiality of Data

If interested parties need to maintain the confidentiality of specific data or information, they should contact Jared Babula in the Commission's Chief Counsel's Office *before* submitting a response to this Invitation. Otherwise, all responses received will become publicly available.

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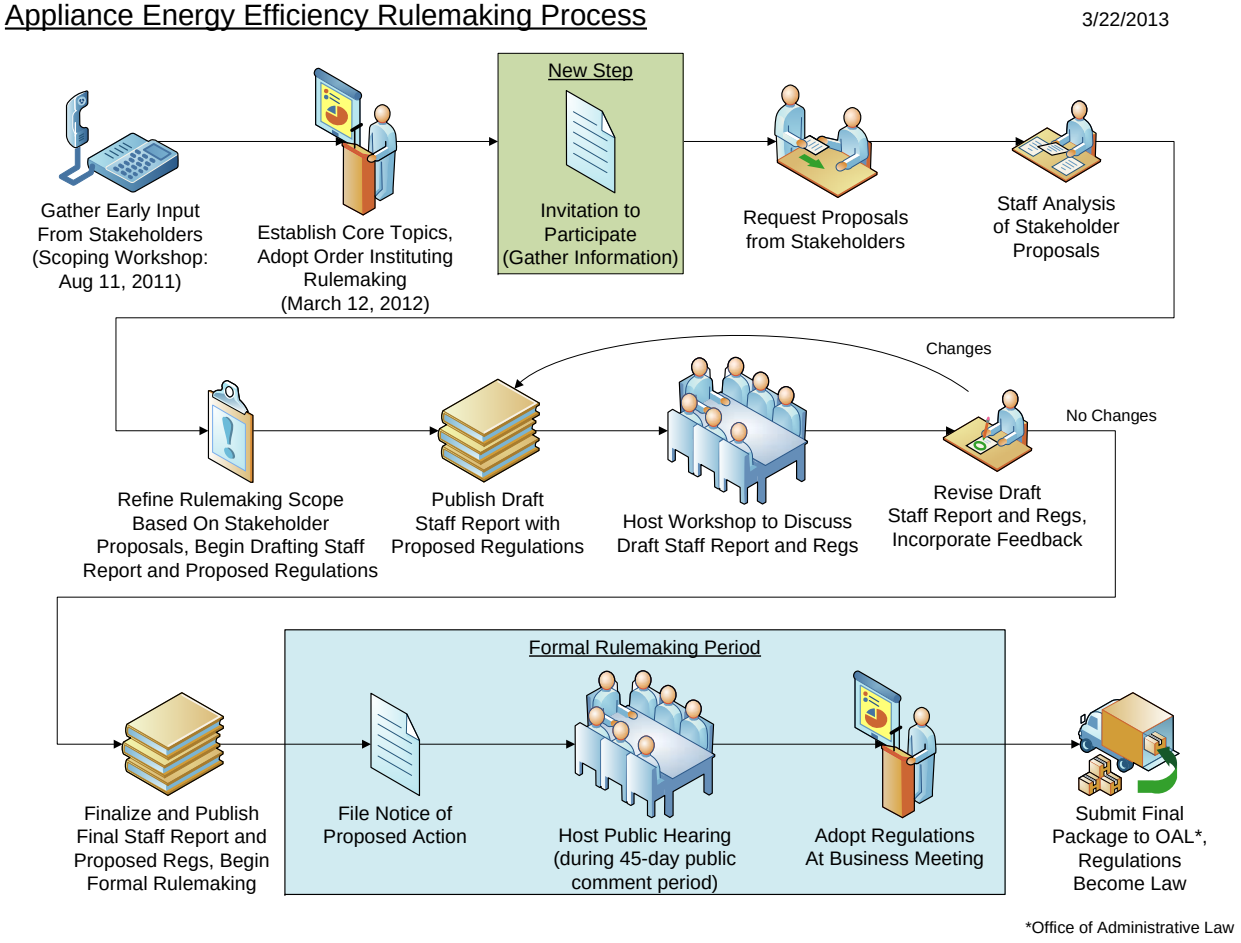
California Energy Commission,
Chief Counsel's Office
1516 Ninth Street, MS 14, Sacramento, CA 95814-5512
Telephone: (916) 651-1462
Email: jared.babula@energy.ca.gov

Next Steps

- Public workshop after the close of the ITP comment period to consider the merits of information and data received.
- Following the workshop, the Commission will request proposals for updated efficiency standards or measures.
- These proposals should be based on the information received through the ITP.
- Commission staff are available to discuss questions and concerns at anytime during the proceeding.

Public Participation



Q&A

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Please submit data and information to
Docket #12-AAER-2A
at docket@energy.ca.gov

This WebEx and the ITP are available online:
http://www.energy.ca.gov/appliances/2013rulemaking/